

East AFRITAC

East Africa Regional Technical Assistance Center

UPLOADING EXCEL WORKBOOK INTO THE PRICE INDEXES

PROCESSOR:

Field Manual #3



East AFRITAC
INTERNATIONAL MONETARY FUND
REGIONAL TECHNICAL
ASSISTANCE CENTER



Compiled by:

Mr. Iddi H. Makame

Selected Acronyms

<i>Ccode</i>	<i>Country Code found in the SPD table</i>
<i>COICOP</i>	<i>Classification of Individual Consumption by Purpose</i>
<i>CNote</i>	<i>Product note explaining the product found in the SPD table</i>
<i>Ctitle</i>	<i>Title of product based on COICOP found in the SPD table</i>
<i>Digit</i>	<i>Level of COICOP detail</i>
<i>ID</i>	<i>Product Identification found in the SPD table</i>
<i>IsActive</i>	<i>The Variety is Active found in the SPD table</i>
<i>HBS</i>	<i>Household Budget Survey</i>
<i>Ocode</i>	<i>OECD Product Code found in the SPD table</i>
<i>Otitle</i>	<i>OECD Classification Title found in the SPD table</i>
<i>Onote</i>	<i>OECD Product note explaining the product</i>
<i>PIPS</i>	<i>Price Index Processor Software</i>
<i>PPS</i>	<i>Point of Purchase Survey</i>
<i>SN</i>	<i>Serial Number assigned to each product and variety</i>
<i>SPD</i>	<i>Structured Product Description</i>
<i>Stitle</i>	<i>SPD title for products</i>
<i>tblCPSPD</i>	<i>Microsoft Access table used to customize country's products</i>
<i>tblCountryVCode</i>	<i>A Dictionary used to create and define local products</i>

<i>VParent</i>	<i>Product defined in Microsoft Access table</i>
<i>VCode</i>	<i>Variety Code defined in Microsoft Access table</i>
<i>VDesc</i>	<i>Variety Description defined in Microsoft Access table</i>



FOREWORD

This manual is the outcome of a joint effort by the Office of the Chief Government Statistician (OCGS), Zanzibar, and East AFRITAC to produce a user's manual for compiling the Consumer Price Index (CPI). The fundamental features and contents presented in this manual aim at strengthening the compilation of the CPI by using a system, known as the Price Index Processing Software (PIPS).

This compilation software is essential for producing CPI estimates. Experience shows that every country within the region has its own CPI compilation program and mainly uses Microsoft Excel. Using the PIPS is an operational step for the CPI harmonization in the region.

The Office of the Chief Government Statistician has worked closely with East AFRITAC to develop a simple user's manual for uploading Excel workbooks into the PIPS. The purpose of this manual is to help East African countries that intend to use the PIPS for compiling their CPI. Thus, I am pleased to introduce this Field Manual, prepared with assistance from the East AFRITAC Statistics Advisor, Dr. Shelley Winston.

Indeed, the success of this publication stems from a concerted effort and cooperation among staff members from the Price Statistics Unit under the Economic Statistics Section of the OCGS, who piloted the PIPS for about three years.

I would like to extend special thanks to the East AFRITAC Statistics Advisor for her encouraging role and great contribution to this endeavour with technical support, advice and encouragement.

Mohammed Hafidh Rajab

Chief the Government Statistician

Office of the Chief Government Statistician

Zanzibar

INQUIRIES

For further information

about this publication and related statistics, contact the

Chief Government Statistician

Office of the Chief Government Statistician

P.O. Box 2321

Zanzibar, United Republic of Tanzania

Phone +255 24 22 31 869

Fax + 255 24 22 31 742

Email : zanstat@ocgs.go.tz

PREAMBLE BY THE EAST AFRITAC COORDINATOR

After years of testing the IMF-developed Price Index Processor Software (PIPS), the Zanzibar Office of the Chief Government Statistician (OCGS) decided to take the decisive step in 2010 to set up and use the PIPS for calculating the CPI. To pass on the knowledge it has gained in this process, the OCGS, with guidance from East AFRITAC, decided to document its experience by publishing this East AFRITAC field manual, with a view to helping other CPI compilers in the East Africa region and elsewhere.

This field manual, “Uploading Excel Workbooks into the Price Index Processor,” aims to assist compilers who have already saved and formatted their data in Excel for their CPI calculation and who would like to import their data into the more robust PIPS. The PIPS is an application developed software, which simplifies sound CPI estimation, analysis, and report generation. The PIPS also follows international best practices for calculating CPIs. For example, the PIPS classifies the index according to the Classification of Individual Consumption by Purpose (COICOP). It promotes regional, items, and outlets price index calculations. More importantly, the PIPS estimates the indexes according to the Jevons (geometric mean) formula for the lower and higher level indices.

I hope that the PIPS will contribute to promoting international and regional consistency and harmonization in CPI methods, estimations, and calculations. Even for those statistical offices that do not use the PIPS, this software will at least provide the templates and guidelines for producing and calculating accurate, credible, reliable, and transparent CPIs.

I would like to thank the following for drafting this Manual. Mr. Iddi Makame, from the Zanzibar Office of the Chief Government Statistician, who was the main author; Ms. Shelley Winston, East AFRITAC Statistics Advisor, for overseeing and providing technical advice and for ensuring quality. I also would like to thank the region’s statistics offices and the IMF Statistics Department for their valuable comments.

Mario de Zamaróczy

East AFRITAC Coordinator

Table of Contents

<i>Selected Acronyms.....</i>	<i>ii</i>
<i>FOREWORD.....</i>	<i>iv</i>
<i>PREAMBLE BY THE EAST AFRITAC COORDINATOR</i>	<i>v</i>
<i>Introduction</i>	<i>1</i>
I. UPLOADING EXCEL WORKBOOK INTO THE PRICE INDEX PROCESSOR.....	2
1.1 <i>Create New CPI Database</i>	<i>2</i>
1.2 <i>Area Description</i>	<i>3</i>
1.3. <i>Outlet Information.....</i>	<i>4</i>
1.4 <i>Entering Weight.....</i>	<i>7</i>
II. JOINING WORKSHEETS.....	10
1.5 <i>Appending worksheets</i>	<i>10</i>
1.6 <i>Adding product and variety to each outlet.....</i>	<i>14</i>
1.7. <i>Entering Price Information.....</i>	<i>19</i>
III. ITEM WEIGHT DETERMINATION AND DISTRIBUTION.....	21
1.8. <i>Reviewing Item Weight Distribution.....</i>	<i>21</i>
1.9. <i>Checking for Data Consistency.....</i>	<i>26</i>

Introduction

This Field Manual Uploading Excel Workbooks into the Price Index Processor tries to address the needs and to provide assistance to countries that have tried or will try to use the Consumer Price Index Price (CPI) Processor Software (PIPS). Therefore, this manual aims to provide easy to follow instructions for uploading already created Excel workbooks and databases that are formatted with expenditure shares, CPI outlets, products, varieties, and price information for uploading into the PIPS compilation system.

This manual, hence, is to be used purely as a guide to accompany the Consumer Price Index Compilation System User Guide, (Price Index Processor Version II: Consumer Price Index, Revised Version, August 2009), which provides in-depth details, definitions, and explanations. Additionally, this manual assumes that CPI compilers are already familiar with the PIPS system.

This Field Manual was drafted with screen shots or “Snapshots” taken directly from the PIPS to facilitate ease of understanding. There are three sections with sub-headings that proceed in a logical manner. Section I starts by demonstrating how to create a new CPI database, how to enter the areas covered, how to add outlet information, and how to enter weights. Section II describes how to append the worksheets created in Section I, how to enter products and varieties for each outlet, and how to enter price information. Section III concludes with reviewing item weight distribution and how to check for data consistency.

The Price Index Processor Software is developed by the International Monetary Fund and has authorized the United Nations Economic Commission for Europe (UNECE) Statistics Division, with whom the IMF has no other affiliation, to distribute the software. The IMF retains ownership rights to the original software. The IMF, the UNECE Statistics Division, and the East Africa Regional Technical Assistance Center assumes no responsibility to users for support or maintenance and has disclaimed all liability for any errors that may exist in the software and for any other claims relating to the software. The PIPS was developed using standard Microsoft tools available to all users and only requires that users have licensed versions of Microsoft Office Suite.

I. UPLOADING EXCEL WORKBOOK INTO THE PRICE INDEX PROCESSOR

1.1 Create New CPI Database

1. Open the PIPS Compiler. On the main window, click **System Configuration**.

System Config

Snapshot 1

Consumer Price Index Compilation Model - [Configure CPI Working Space]

File Edit Data Utilities Report Options Window Help

Configure Default Database Provider

☒ MS Access ☐ MS SQL Server DB Status: On Line Test Connection Configure DataSource

Connection String: Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\Program Files\CPI System\Data\CPI_Example.mdb;Persist Security Info=False

Configure CPI Working Environment

Default CPI Compilation Country: Tanzania

Default Database File Location: C:\Program Files\CPI System\Data\

Default CPI Database (e.g., CPI.MDB):

Create New CPI Database: (e.g. newppi.mdb) Country_CPI ☐ Set it as Default DB Create Access DB

Change the weight date 1/2002 to 1/2002

Set Compilation Date DB Repair + Compact Update DB Table

Default Imputation Method

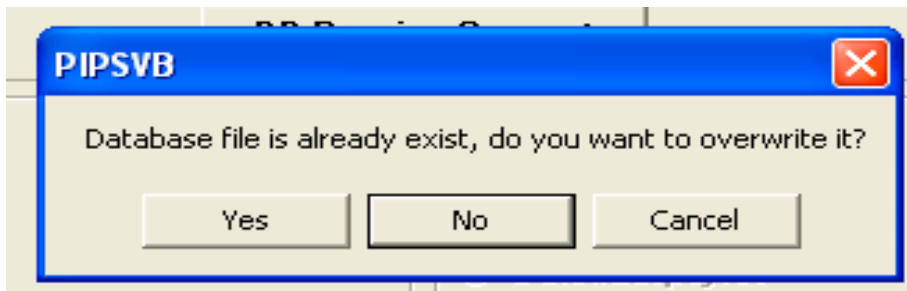
☒ By Product ☐ By Region ☐ By Outlet

Default Elementary Formula

☐ Jevons:Laspeyres ☒ Jevons:Geo-Laspeyres ☐ Dutot:Laspeyres ☐ Fisher Index ☐ Paasche Index

Apply Refresh Cancel

2. Write the name of the new CPI Database in **Create New CPI Database** field, change the weight dates. The default imputation method can be set now or at any time when needed. The elementary formulae can also be set at this time or later. When finished, click **Create Access DB** to create the database. Then, click **Cancel** to return to the main window.



3. If this message appears, it means that that database being created already exists, in that case, click **Cancel**. Click the **Set is as Default DB** box in order for the system to always open the working database. Click cancel to return to the main page.

1.2 Area Description

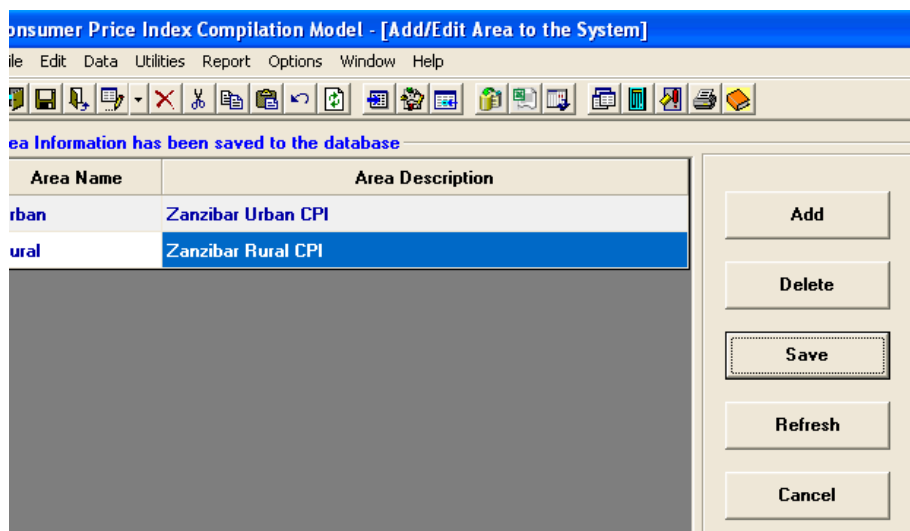
4. From the main window, click **Add New** and then **Add/Edit Area**.



Snapshot 2

5. Define the **Area** that will be covered in the CPI. This information will determine how many regions or stratified indexes will be produced. For example, a country may cover and include urban, rural, lower income, middle income, upper income areas..

Snapshot 3



Note, comparing the CPI for an area to another area index gives an indication of difference among the areas' rates of price change. Such comparisons indicate whether, over time, prices of similar items that consumers in one area tend to buy have risen more or less rapidly than the prices of items that consumers in another area tend to buy. **These comparisons DO NOT indicate whether the average level of prices in an area is higher or lower**

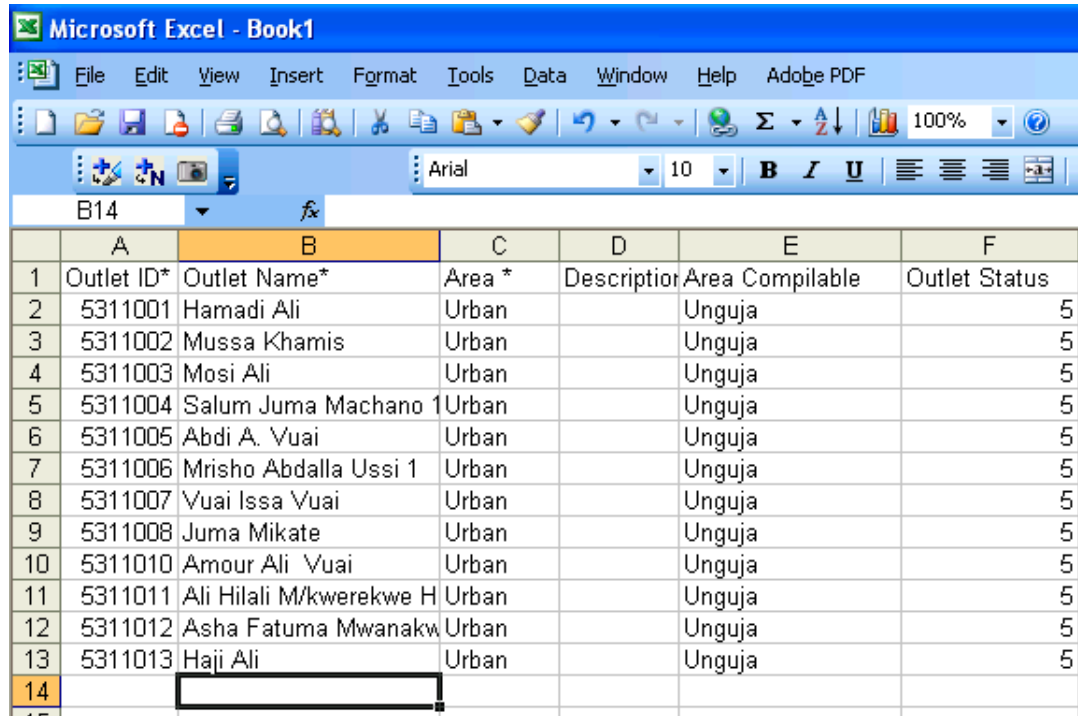
than the average level of prices in another area.

Click **Save** then **Cancel** to return to CPI Main Window.

1.3. Outlet Information

6. Organize the CPI outlets information in a Microsoft Excel worksheet, as shown in Snapshot 4. This worksheet is formatted exactly as the PIPS processor format.

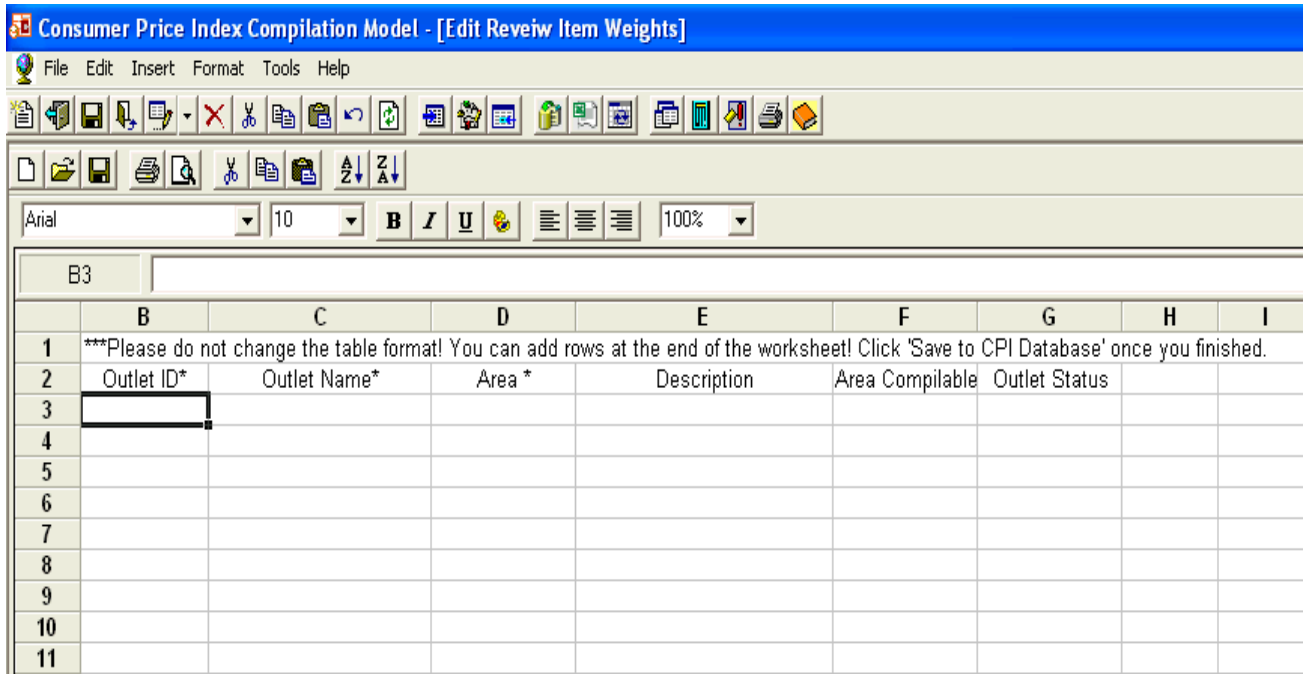
Snapshot 4



	A	B	C	D	E	F
	Outlet ID*	Outlet Name*	Area *	Description	Area Compatible	Outlet Status
1	5311001	Hamadi Ali	Urban		Unguja	5
2	5311002	Mussa Khamis	Urban		Unguja	5
3	5311003	Mosi Ali	Urban		Unguja	5
4	5311004	Salum Juma Machano	Urban		Unguja	5
5	5311005	Abdi A. Vuai	Urban		Unguja	5
6	5311006	Mrisho Abdalla Ussi	Urban		Unguja	5
7	5311007	Vuai Issa Vuai	Urban		Unguja	5
8	5311008	Juma Mikate	Urban		Unguja	5
9	5311010	Amour Ali Vuai	Urban		Unguja	5
10	5311011	Ali Hilali M/kwerekwe H	Urban		Unguja	5
11	5311012	Asha Fatuma Mwanakw	Urban		Unguja	5
12	5311013	Haji Ali	Urban		Unguja	5
13						
14						

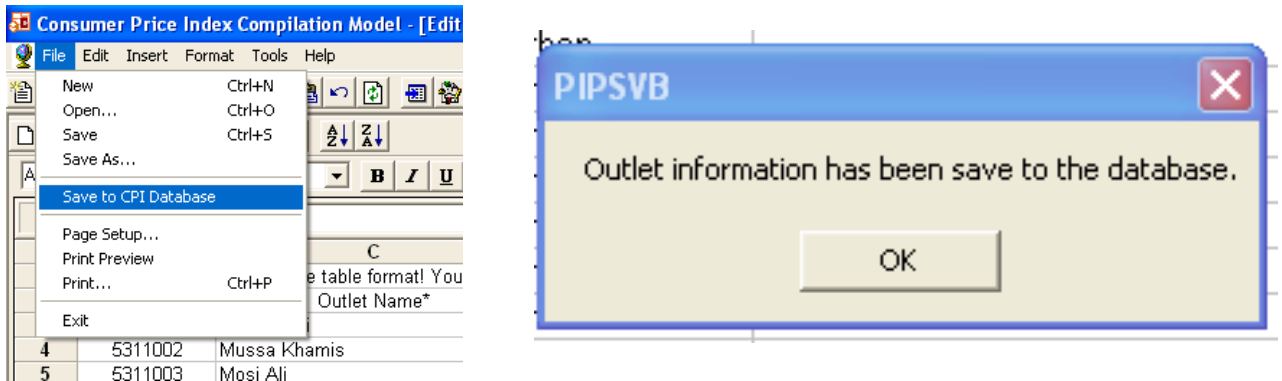
- Once finished, on the PIPS main window click **Add New** then **Batch Edit/Upload** to upload the outlets information. An Excel spreadsheet, shown in Snapshot 5, will open. The information from the Excel spreadsheet created, Snapshot 4, can then be copied and pasted into the PIPS spreadsheet, Snapshot 5. Note, the columns include **Outlet ID**, **Outlet Name**, **Area**, **Description**, **Area Compatible**, and **Outlet Status**. Keep in mind that **Area** refers to urban, rural, etc., depending on how the expenditure weights were determined. **Area Compatible** refers to the name of the area provided in column D; For example, Unguja is the name of the urban area shown in Snapshot 4.

Snapshot 5



- To save the outlets information into the PIPS compiler, select **file menu** and then **save to CPI database** as shown in Snapshot 6.

Snapshot 6



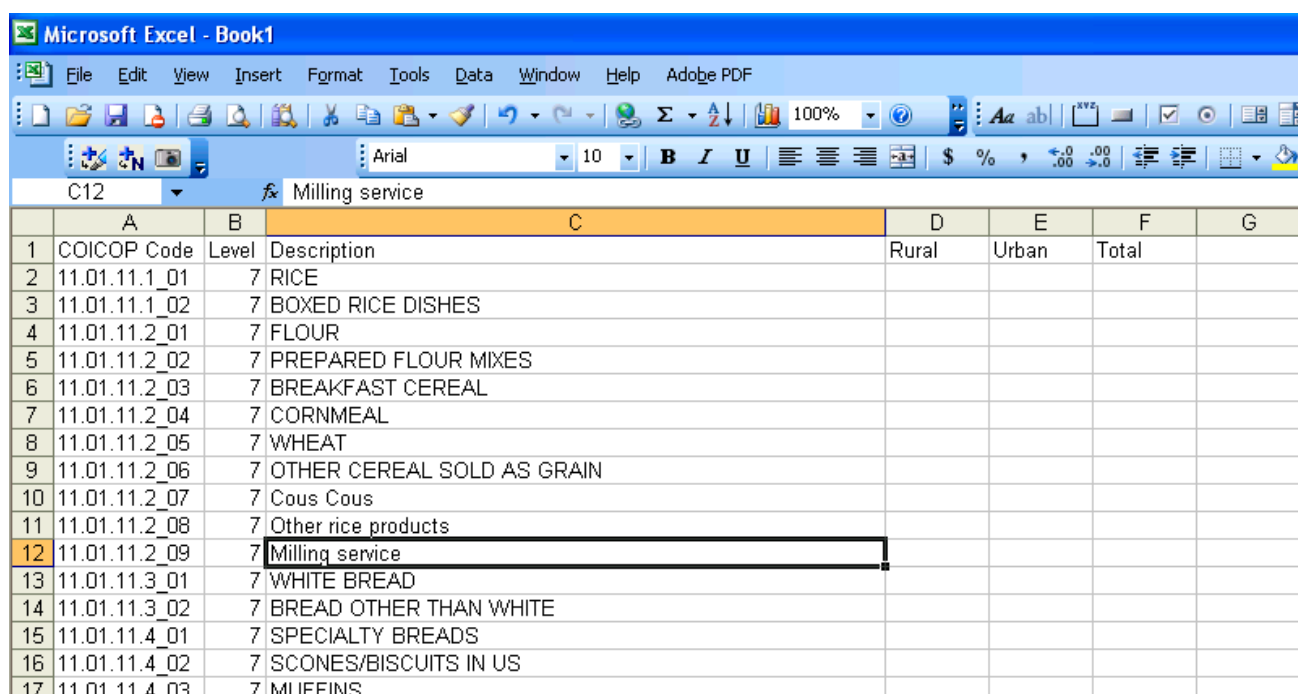
- After saving to **CPI Database**, on **file menu**, click **exit** to return to the PIPS Main Menu. A message will appear saying that the outlet information has been successfully saved.

To check that the outlet data have been uploaded correctly, click **Edit**, then the list of outlets will appear. If correct, click **Cancel**.

1.4 Entering Weight

10. In an Excel spreadsheet, organize the CPI weight information, if possible, at level 7 of the Classification of Individual Consumption by Purpose (COICOP) for which expenditure weights were determined. An example is shown in Snapshot 7. Note, **Total** is equal to **Rural** plus **Urban**.

Snapshot 7



	A	B	C	D	E	F	G
	COICOP Code	Level	Description	Rural	Urban	Total	
1	11.01.11.1_01	7	RICE				
2	11.01.11.1_02	7	BOXED RICE DISHES				
3	11.01.11.2_01	7	FLOUR				
4	11.01.11.2_02	7	PREPARED FLOUR MIXES				
5	11.01.11.2_03	7	BREAKFAST CEREAL				
6	11.01.11.2_04	7	CORNMEAL				
7	11.01.11.2_05	7	WHEAT				
8	11.01.11.2_06	7	OTHER CEREAL SOLD AS GRAIN				
9	11.01.11.2_07	7	Cous Cous				
10	11.01.11.2_08	7	Other rice products				
11	11.01.11.2_09	7	Milling service				
12	11.01.11.3_01	7	WHITE BREAD				
13	11.01.11.3_02	7	BREAD OTHER THAN WHITE				
14	11.01.11.4_01	7	SPECIALTY BREADS				
15	11.01.11.4_02	7	SCONES/BISCUITS IN US				
16	11.01.11.4_03	7	MUFFINS				

11. Next, on the PIPS main window click **Item Weights** or, go to the **Utilities** menu then select **Item Weights Upload Template**. Before clicking **Generate**, make sure level 7 is selected. Snapshot 8 will open.

Snapshot 8

Consumer Price Index Compilation Model - [Generate Spreadsheet Template for Weights Upload]

File Edit Data Utilities Report Options Window Help

OECD Product Coding System - at 7 detail level. Total 129 records

Select Level: 7

☐ Display Mixed Level

Area Code

☒ Urban

☒ Rural

☒ Total

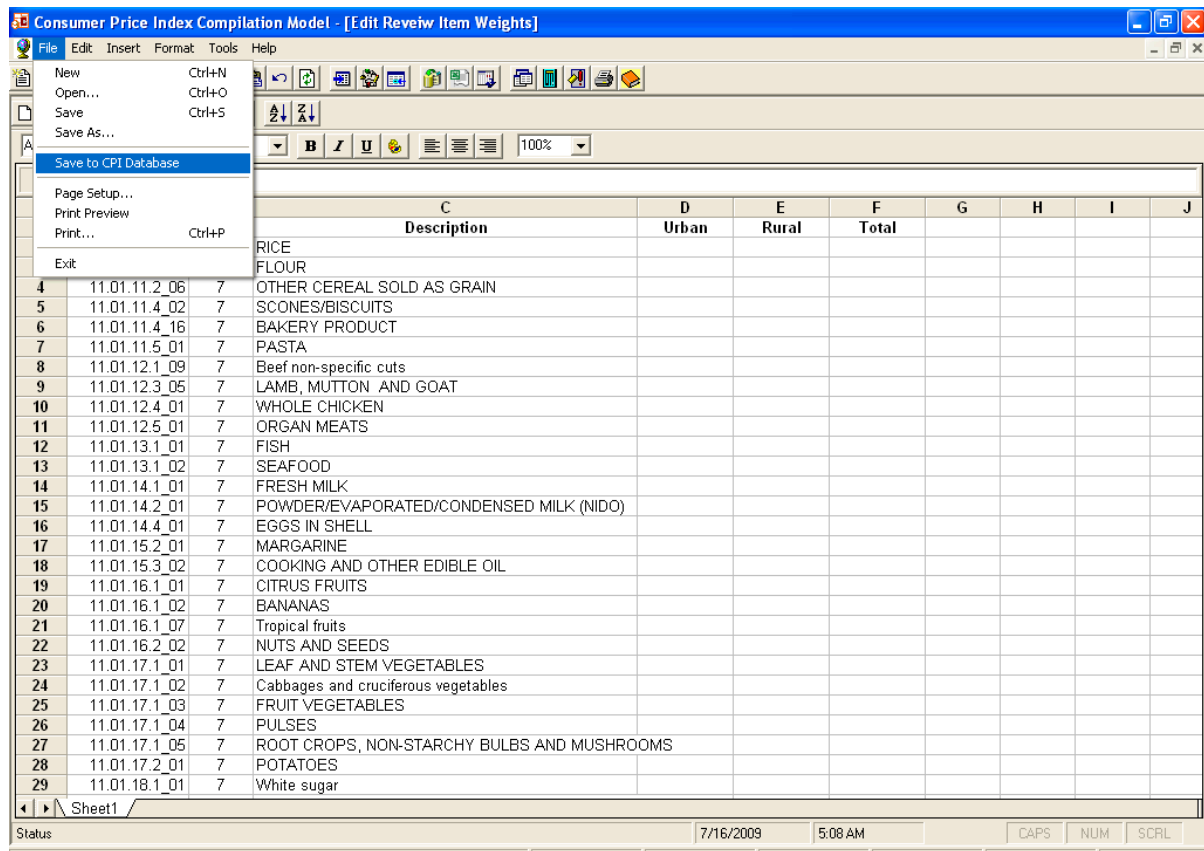
Generate Add Area

Refresh Cancel

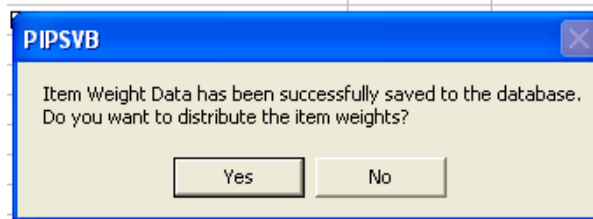
COICOP-ICP	COICOP	Level	Description
<input checked="" type="checkbox"/> 11.01.11.1_01		7	RICE
<input checked="" type="checkbox"/> 11.01.11.2_01		7	FLOUR
<input checked="" type="checkbox"/> 11.01.11.2_06		7	OTHER CEREAL SOLD AS GRAIN
<input checked="" type="checkbox"/> 11.01.11.4_02		7	SCONES/BISCUITS
<input checked="" type="checkbox"/> 11.01.11.4_16		7	BAKERY PRODUCT
<input checked="" type="checkbox"/> 11.01.11.5_01		7	PASTA
<input checked="" type="checkbox"/> 11.01.12.1_09		7	Beef non-specific cuts
<input checked="" type="checkbox"/> 11.01.12.3_05		7	LAMB, MUTTON AND GOAT
<input checked="" type="checkbox"/> 11.01.12.4_01		7	WHOLE CHICKEN
<input checked="" type="checkbox"/> 11.01.12.5_01		7	ORGAN MEATS
<input checked="" type="checkbox"/> 11.01.13.1_01		7	FISH
<input checked="" type="checkbox"/> 11.01.13.1_02	01.1.3.2	7	SEAFOOD
<input checked="" type="checkbox"/> 11.01.14.1_01		7	FRESH MILK
<input checked="" type="checkbox"/> 11.01.14.2_01		7	POWDER/EVAPORATED/CONDENSED MILK (NIDO)
<input checked="" type="checkbox"/> 11.01.14.4_01		7	EGGS IN SHELL
<input checked="" type="checkbox"/> 11.01.15.2_01		7	MARGARINE
<input checked="" type="checkbox"/> 11.01.15.3_02		7	COOKING AND OTHER EDIBLE OIL
<input checked="" type="checkbox"/> 11.01.16.1_01		7	CITRUS FRUITS
<input checked="" type="checkbox"/> 11.01.16.1_02	01.1.6.2	7	BANANAS
<input checked="" type="checkbox"/> 11.01.16.1_07	01.1.6.7	7	Tropical fruits
<input checked="" type="checkbox"/> 11.01.16.2_02		7	NUTS AND SEEDS
<input checked="" type="checkbox"/> 11.01.17.1_01		7	LEAF AND STEM VEGETABLES
<input checked="" type="checkbox"/> 11.01.17.1_02	01.1.7.2	7	Cabbages and cruciferous vegetables
<input checked="" type="checkbox"/> 11.01.17.1_03	01.1.7.3	7	FRUIT VEGETABLES
<input checked="" type="checkbox"/> 11.01.17.1_04		7	PULSES
<input checked="" type="checkbox"/> 11.01.17.1_05	01.1.7.4	7	ROOT CROPS, NON-STARCHY BULBS AND MUSHROOMS
<input checked="" type="checkbox"/> 11.01.17.2_01		7	POTATOES
<input checked="" type="checkbox"/> 11.01.18.1_01		7	White sugar
<input checked="" type="checkbox"/> 11.01.18.2_01		7	JELLY, JAM, PRESERVES, MARMALADE, FRUIT BUTTER
<input checked="" type="checkbox"/> 11.01.18.2_03		7	Honey
<input checked="" type="checkbox"/> 11.01.19.1_09		7	SALT
<input checked="" type="checkbox"/> 11.01.19.1_11	01.1.9.1	7	Spices and dried herbs
<input checked="" type="checkbox"/> 11.01.21.1_01		7	COFFEE
<input checked="" type="checkbox"/> 11.01.21.1_02	01.2.1.2	7	TEA
<input checked="" type="checkbox"/> 11.01.22.1_01		7	Mineral Waters

12. Remember to select level 7, and then click the **Generate** to create an Excel spreadsheet. Snapshot 9 will appear. From this spreadsheet, delete all the information except for the column headers.

Snapshot 9



13. From the Excel spreadsheet created (step 10) copy and paste the information into the Excel PIPS spreadsheet (step 12, Snapshot 9). Make sure all the information is entered in the correct columns.
14. When finished, under the file menu, click **Save to CPI database** as shown in Snapshot 9, then click **Exit**. To generate an Excel spreadsheet template for Weight upload click **Cancel** to return **PIPS Main Menu**.



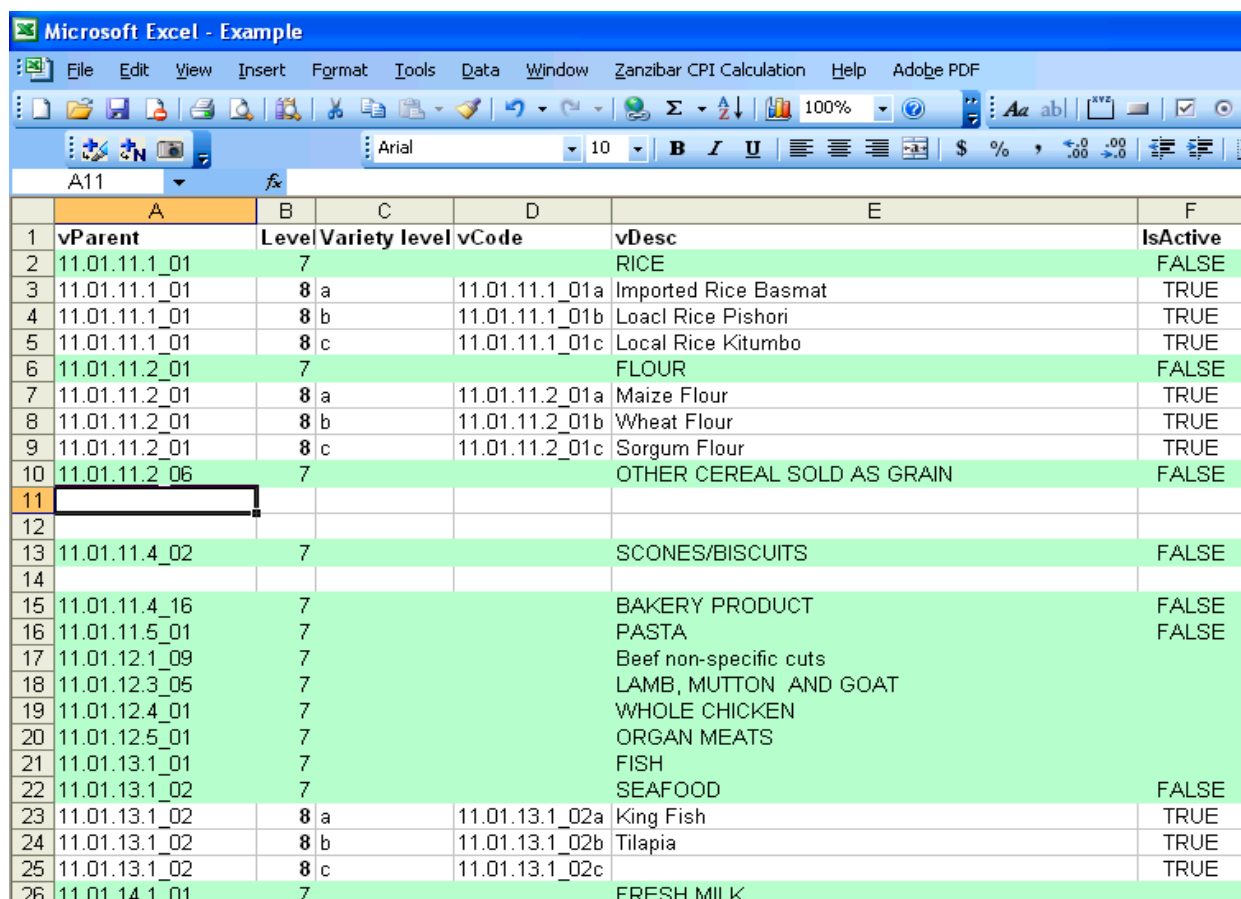
15. At this time, products per outlets have not yet been assigned. Therefore, do not distribute the item weights when prompted in the **PIPSVB** Box; select **NO**.

II. JOINING WORKSHEETS

1.5 Appending worksheets

16. To calculate the price index, prices are usually entered for each product at the variety level. Therefore, an Excel spreadsheet should have been created that has variety/ies assigned to each product. Varieties are usually found at level 8 of the COICOP hierarchical structure. For example, 11.01.11.1_01 is the level 7 for rice, and 11.01.11.1_01a, level 8 is one type of variety for rice (Snapshot 10).

Snapshot 10



	A	B	C	D	E	F
	vParent	Level	Variety level	vCode	vDesc	IsActive
1	11.01.11.1_01	7			RICE	FALSE
2	11.01.11.1_01	8	a	11.01.11.1_01a	Imported Rice Basmat	TRUE
3	11.01.11.1_01	8	b	11.01.11.1_01b	Local Rice Pishori	TRUE
4	11.01.11.1_01	8	c	11.01.11.1_01c	Local Rice Kitumbo	TRUE
5	11.01.11.2_01	7			FLOUR	FALSE
6	11.01.11.2_01	8	a	11.01.11.2_01a	Maize Flour	TRUE
7	11.01.11.2_01	8	b	11.01.11.2_01b	Wheat Flour	TRUE
8	11.01.11.2_01	8	c	11.01.11.2_01c	Sorgum Flour	TRUE
9	11.01.11.2_06	7			OTHER CEREAL SOLD AS GRAIN	FALSE
10						
11						
12						
13	11.01.11.4_02	7			SCONES/BISCUITS	FALSE
14						
15	11.01.11.4_16	7			BAKERY PRODUCT	FALSE
16	11.01.11.5_01	7			PASTA	FALSE
17	11.01.12.1_09	7			Beef non-specific cuts	
18	11.01.12.3_05	7			LAMB, MUTTON AND GOAT	
19	11.01.12.4_01	7			WHOLE CHICKEN	
20	11.01.12.5_01	7			ORGAN MEATS	
21	11.01.13.1_01	7			FISH	
22	11.01.13.1_02	7			SEAFOOD	FALSE
23	11.01.13.1_02	8	a	11.01.13.1_02a	King Fish	TRUE
24	11.01.13.1_02	8	b	11.01.13.1_02b	Tilapia	TRUE
25	11.01.13.1_02	8	c	11.01.13.1_02c		TRUE
26	11.01.14.1_01	7			FRESH MILK	

17. Create a spreadsheet in Excel (Snapshot 12) similar to the information shown in the Access table in Snapshot 11. The columns should be named: VCode (the variety code), VParent (the product), VDesc (the variety description), and IsActive (the variety is active).

Snapshot 11

Microsoft Access

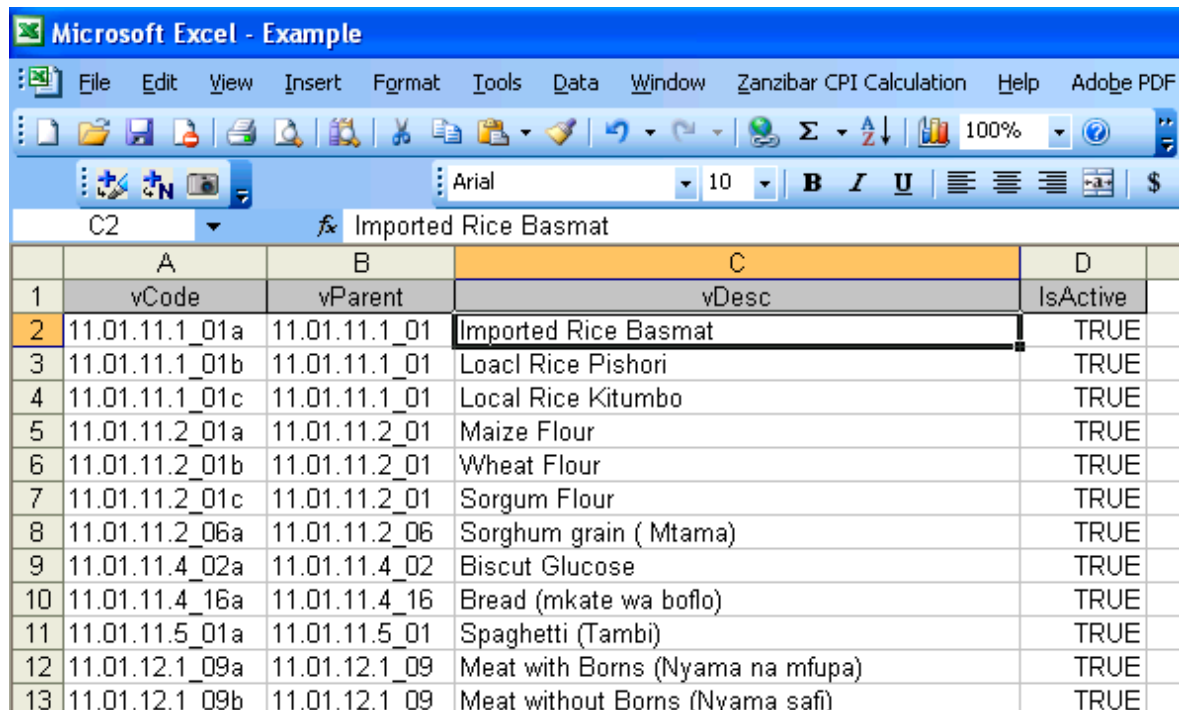
File Edit View Insert Format Records Tools Window Help Adobe PDF

tblCountryVCode : Table

vCode	vParent	vDesc	IsActive
11.01.11.1_01c	11.01.11.1_01	Thailand	<input checked="" type="checkbox"/>
11.01.11.2_01a	11.01.11.2_01	Wheat flour (unga wa ngano)	<input checked="" type="checkbox"/>
11.01.11.2_01b	11.01.11.2_01	Maize Flour azam (Unga wa ser	<input checked="" type="checkbox"/>
11.01.11.2_01c	11.01.11.2_01	Sorghum Flour (Unga wa Mtama	<input checked="" type="checkbox"/>
11.01.11.2_01d	11.01.11.2_01	Baby food Excluding milk (Cen	<input checked="" type="checkbox"/>
11.01.11.2_06a	11.01.11.2_06	Sorghum grain (Mtama)	<input checked="" type="checkbox"/>
11.01.11.4_02a	11.01.11.4_02	Biscut Glucose	<input checked="" type="checkbox"/>
11.01.11.4_16a	11.01.11.4_16	Bread (mkate wa boflo)	<input checked="" type="checkbox"/>
11.01.11.5_01a	11.01.11.5_01	Spaghetti (Tambi)	<input checked="" type="checkbox"/>
11.01.12.1_09a	11.01.12.1_09	Meat with Borns (Nyama na mfu	<input checked="" type="checkbox"/>
11.01.12.1_09b	11.01.12.1_09	Meat without Borns (Nyama safi	<input checked="" type="checkbox"/>
11.01.12.3_05a	11.01.12.3_05	Goat Meat	<input checked="" type="checkbox"/>
11.01.12.4_01a	11.01.12.4_01	Chicken (kuku aliechinjwa)	<input checked="" type="checkbox"/>
11.01.12.5_01a	11.01.12.5_01	Organ Meat (Utumbo)	<input checked="" type="checkbox"/>
11.01.13.1_01a	11.01.13.1_01	King Fish (Nguru)	<input checked="" type="checkbox"/>
11.01.13.1_01b	11.01.13.1_01	Tuna (Jodari)	<input checked="" type="checkbox"/>
11.01.13.1_01c	11.01.13.1_01	Emperors (Changu)	<input checked="" type="checkbox"/>
11.01.13.1_01d	11.01.13.1_01	Sword Fish (Nduwaro)	<input checked="" type="checkbox"/>

18. Remember, "IsActive" means that price information for this item variety is available. Save the spreadsheet as **CountryVariety**.

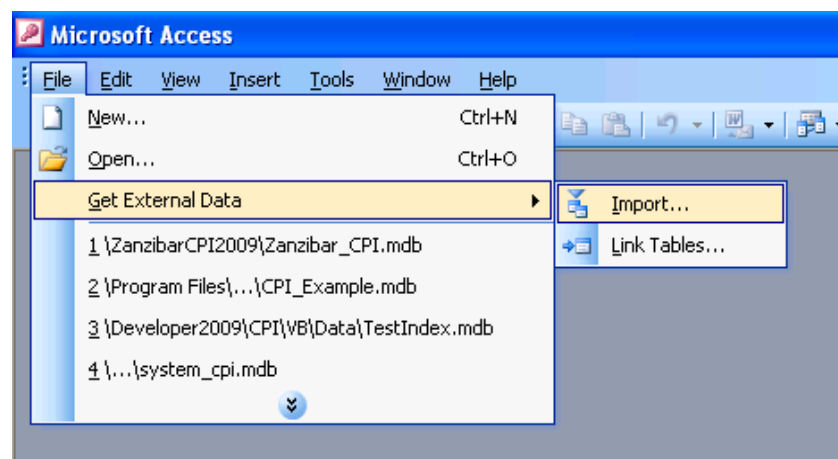
Snapshot 12



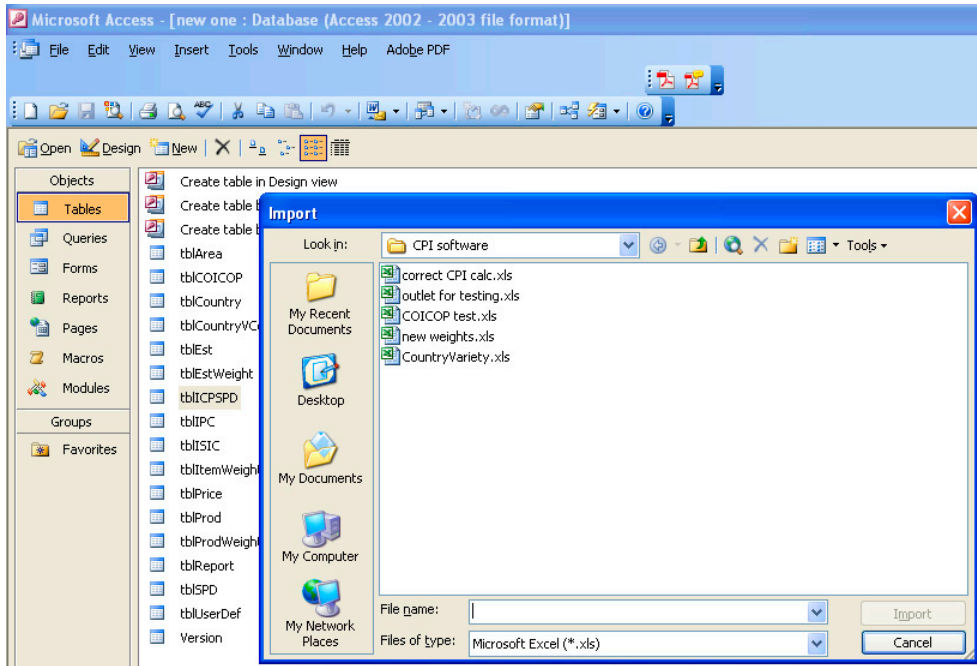
	A	B	C	D
	vCode	vParent	vDesc	IsActive
2	11.01.11.1_01a	11.01.11.1_01	Imported Rice Basmat	TRUE
3	11.01.11.1_01b	11.01.11.1_01	Local Rice Pishori	TRUE
4	11.01.11.1_01c	11.01.11.1_01	Local Rice Kitumbo	TRUE
5	11.01.11.2_01a	11.01.11.2_01	Maize Flour	TRUE
6	11.01.11.2_01b	11.01.11.2_01	Wheat Flour	TRUE
7	11.01.11.2_01c	11.01.11.2_01	Sorgum Flour	TRUE
8	11.01.11.2_06a	11.01.11.2_06	Sorghum grain (Mtama)	TRUE
9	11.01.11.4_02a	11.01.11.4_02	Biscut Glucose	TRUE
10	11.01.11.4_16a	11.01.11.4_16	Bread (mkate wa boflo)	TRUE
11	11.01.11.5_01a	11.01.11.5_01	Spaghetti (Tambi)	TRUE
12	11.01.12.1_09a	11.01.12.1_09	Meat with Borns (Nyama na mfupa)	TRUE
13	11.01.12.1_09b	11.01.12.1_09	Meat without Borns (Nyama safi)	TRUE

19. Next, use Microsoft Access to import **“CountryVariety”** from the created Excel spreadsheet. Open the **CPI Access Database**, which was the database created in Snapshot 1 (Default Database File Location, and Default CPI Database, i.e., CPI.mdb). On file menu, click **Get External Data**, then **import**.

Snapshot 13



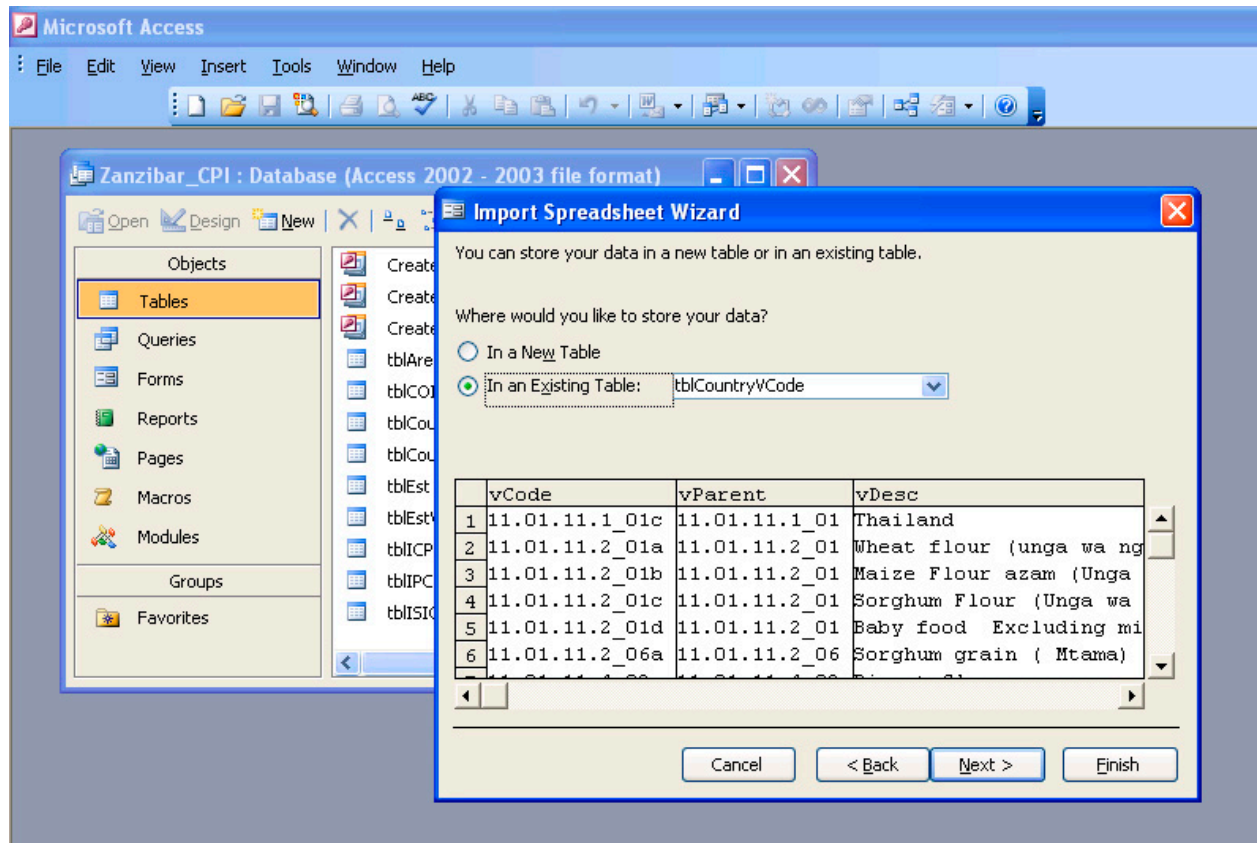
Snapshot 14



20. From the **import** dialog box, in the **files of type**, select Microsoft Excel (*.xls). Select **CountryVariety.xls** that should have been created and saved (Snapshot 14), then click **import**.

21. Append the worksheet in the existing “tblCountryVCode.”

Snapshot 15



22. When finished, close Microsoft Access.

1.6 Adding product and variety to each outlet

23. The next step is to define in each outlet, the product/s and varieties. Note, there is no easy way to import the varieties for each outlet, since the system is building relationships and integrity. That is, a Serial Number (SN) is being assigned to each product and variety.

Edit

Click on the Main PIPS window, select the outlet of interest, right click on the outlet, and then click **Edit Product**.

Snapshot 16

Consumer Price Index Compilation Model - [Search for Outlet]

File Edit Data Utilities Report Options Window Help

Search for Outlet

☐ Search by Outlet ID
☐ Search by Key Words
☐ Search by Area (W)
☐ Search Alphabetically

☒ List All Outlet
☐ Search by Last Column

A-B C-D E-F G-H I-J K-L M-N O-P Q-R S-T U-V W-X Y-Z

Show Last Column By
☒ Area (Weight)
☐ Area (Compilable)
☐ District
☐ Data Collector

Go

Outlet Information - total 267 records. (right click for editing)

Outlet ID	Outlet Name	Notes	Market	Area (Weights)
5311001	Hamadi Ali		Urban	Urban
5311002	Musa Khamis		Urban	Urban
5311003	Ali		Urban	Urban
5311004	Juma Machano 1		Urban	Urban
5311005	Vuai		Urban	Urban
5311006	Abdalla Ussi 1		Urban	Urban
5311007	sa Vuai		Urban	Urban
5311008	Mikate		Urban	Urban
5311009	Ali Vuai		Urban	Urban
5311010	Ali M/kwerekwe Hardware		Urban	Urban
5311011	atuma Mwanakwerekwe		Urban	Urban
5311013	Haji Ali		Urban	Urban
5311014	Mzee Hamadi (madafu)		Urban	Urban
5311015	Ahmed Saidi		Urban	Urban

Edit Outlet
 Edit Product
 Edit Price
 Edit Notes
 Refresh
 Clone Outlet
 Delete Outlet
 Save Grid

Snapshot 17

Consumer Price Index Compilation Model - [Products & Varieties]

File Edit Data Utilities Report Options Window Help

Outlet Weight

Outlet ID: 1101.00

Outlet Name: Jones Bakery

Weight Design Date: 01/2005

Outlet Assigned Weight*: 0

Outlet Adjusted Weight: 0

Product - Variety - Add New Records

SN	Product Code	Product Description	Unit	Weight	Share	Active
1					100.00%	<input checked="" type="checkbox"/>

Ready... SWINSTON 1/30/2010 4:49 AM CAPS INS NUM MS Access

start Revised3 Price Index ... Inbox - Microsoft Out... Microsoft Excel - Cou... Consumer Price Inde... 4:49 AM

Buttons: Add Product Add Variety Delete Save Refresh Cancel Price Input

24. Click **Add Product**, and then click the **icon** to select the product. At this step, the **COICOP Product Code Table** will open. Next, select the product for which there is at least a variety item for collecting a price.

Snapshot 18

Consumer Price Index Compilation Model - [[Select a Product Code]]

File Edit Data Utilities Report Options Window Help

Search for a product from OECD Classification

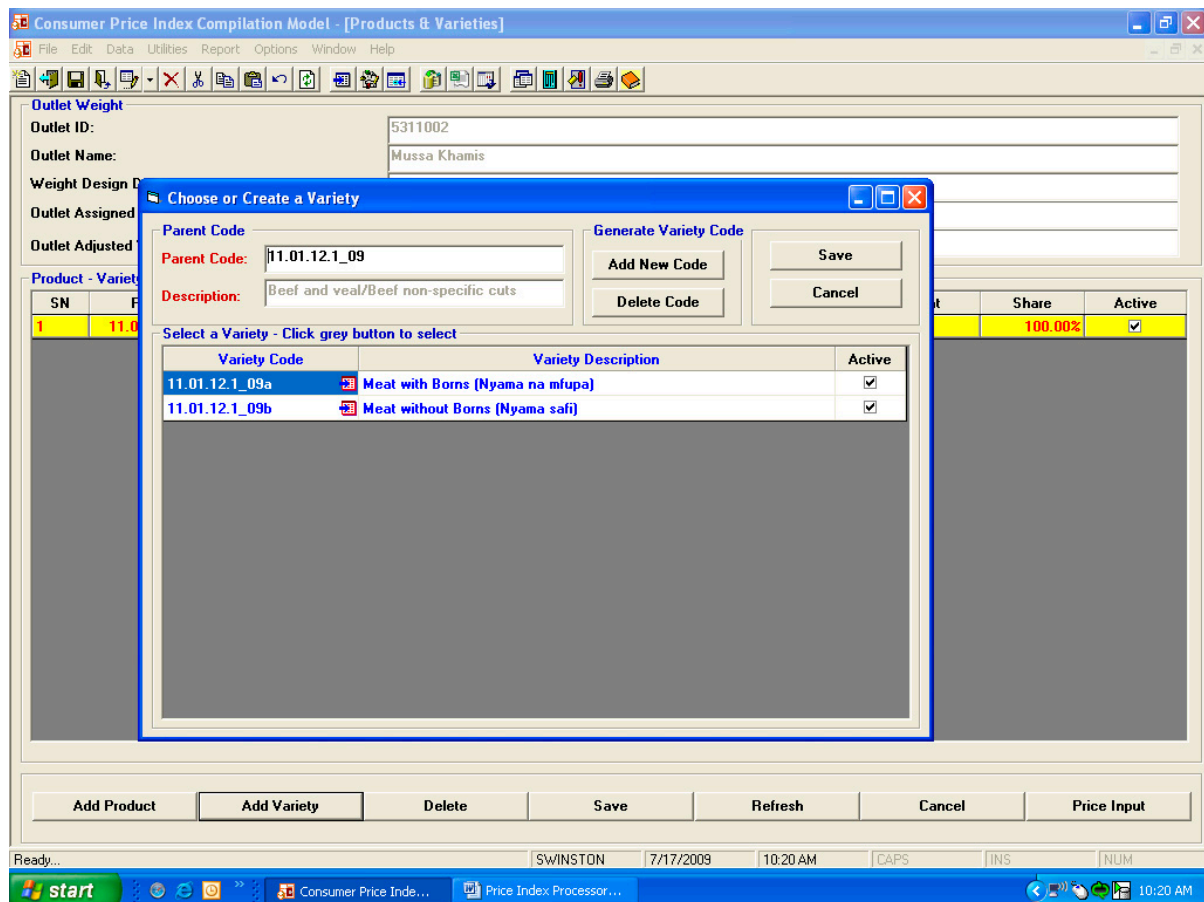
Key words: Search List All Cancel

COICOP-ICP Product Classification, generating 1258 Records.

COICOP-ICP	COICOP	Level	Description
1		1	GROSS DOMESTIC PRODUCT
11		2	INDIVIDUAL CONSUMPTION EXPENDITURE BY HOUSEHOLDS
11.01		3	FOOD AND NON-ALCOHOLIC BEVERAGES
11.01.1		4	FOOD
11.01.11	01.1.1.	5	Bread and cereals
11.01.11.1	01.1.1.1	6	Rice
11.01.11.2	01.1.1.5	6	Other cereals, flour and other products
01		7	FLOUR
02		7	PREPARED FLOUR MIXES
03		7	BREAKFAST CEREAL
04		7	CORNMEAL
05		7	WHEAT
06		7	OTHER CEREAL SOLD AS GRAIN
07		7	Cous Cous
08		7	Other rice products
09		7	Milling service
11.01.11.3	01.1.1.2	6	Bread
11.01.11.4	01.1.1.4	6	Other bakery products

25. Snapshot 19 shows how to select the varieties. Remember that the varieties were appended to the products (Snapshot 15). Therefore, the varieties are associated with the products.

Snapshot 19

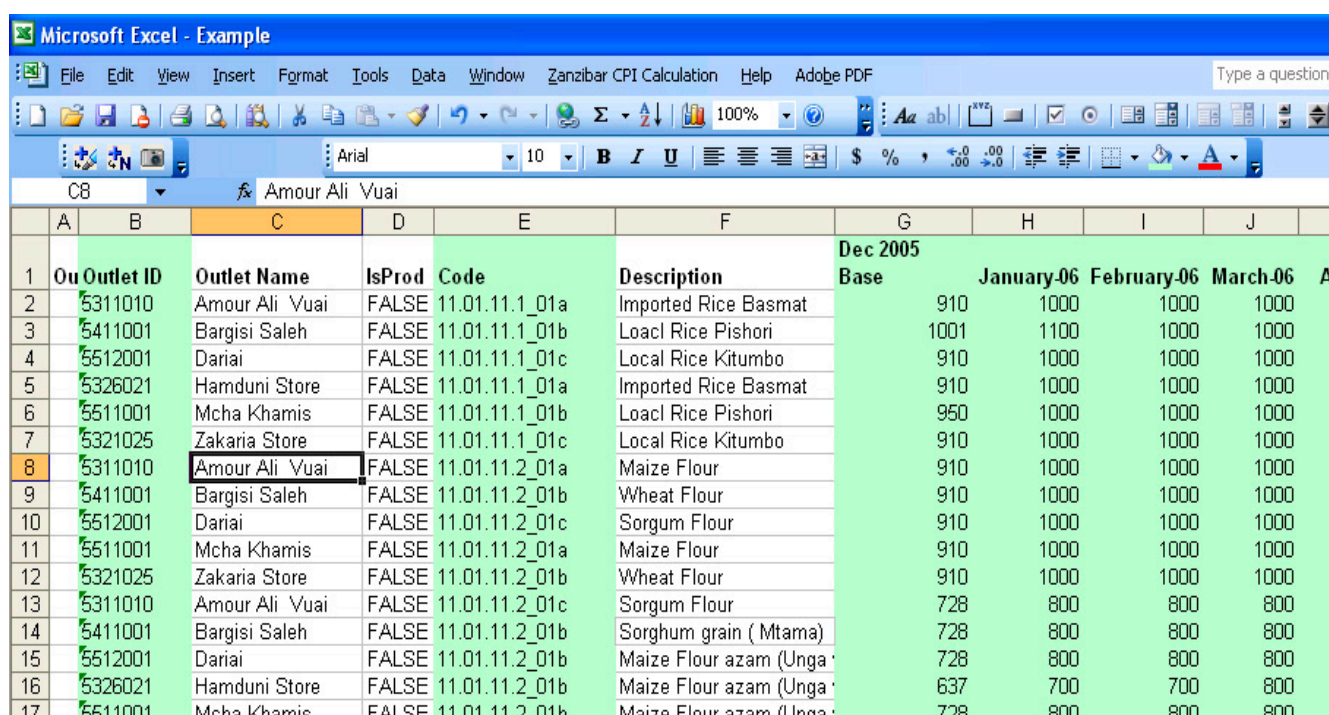


26. Once the products and varieties have been entered, click **Cancel** to select another outlet. Click **Cancel** to return to PIPS main menu.

1.7. Entering Price Information

27. At this point, all the outlets with their products and varieties should have been entered. Recall also those weights for each product were also entered (Snapshot 7, paragraph 10. More importantly, the price information (base price, previous price, and current price) for the varieties should also be entered.
28. Before entering price information into the PIPS, make sure the Excel spreadsheet with price information is organized according to at least, Outlet ID, Outlet Name, Variety Code, Description, base price, previous price, and current price (Snapshot 20). Columns, B, E and G are very important.

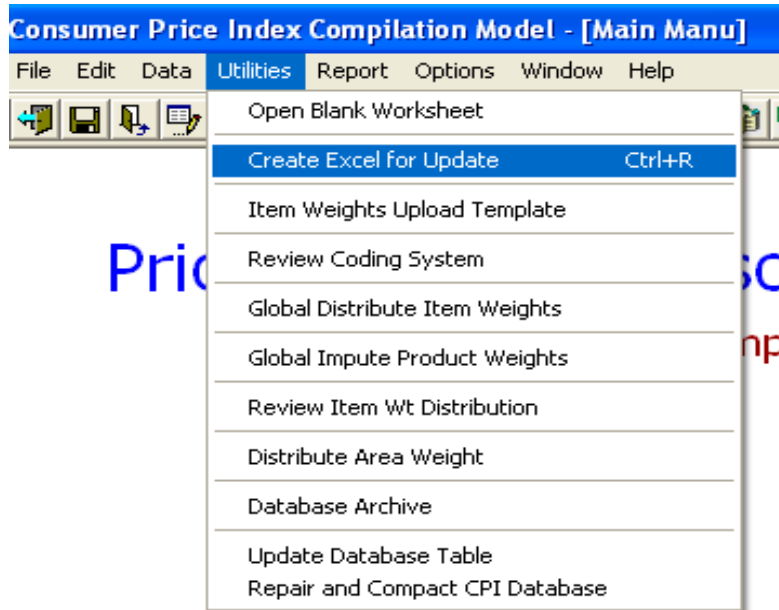
Snapshot 20



	A	B	C	D	E	F	G	H	I	J	K
		Outlet ID	Outlet Name	IsProd	Code	Description	Dec 2005 Base	January-06	February-06	March-06	
1		5311010	Amour Ali Vuai	FALSE	11.01.11.1_01a	Imported Rice Basmat	910	1000	1000	1000	
2		5411001	Bargisi Saleh	FALSE	11.01.11.1_01b	Local Rice Pishori	1001	1100	1000	1000	
3		5512001	Dariai	FALSE	11.01.11.1_01c	Local Rice Kitumbo	910	1000	1000	1000	
4		5326021	Hamduni Store	FALSE	11.01.11.1_01a	Imported Rice Basmat	910	1000	1000	1000	
5		5511001	Mcha Khamis	FALSE	11.01.11.1_01b	Local Rice Pishori	950	1000	1000	1000	
6		5321025	Zakaria Store	FALSE	11.01.11.1_01c	Local Rice Kitumbo	910	1000	1000	1000	
7		5311010	Amour Ali Vuai	FALSE	11.01.11.2_01a	Maize Flour	910	1000	1000	1000	
8		5411001	Bargisi Saleh	FALSE	11.01.11.2_01b	Wheat Flour	910	1000	1000	1000	
9		5512001	Dariai	FALSE	11.01.11.2_01c	Sorghum Flour	910	1000	1000	1000	
10		5511001	Mcha Khamis	FALSE	11.01.11.2_01a	Maize Flour	910	1000	1000	1000	
11		5321025	Zakaria Store	FALSE	11.01.11.2_01b	Wheat Flour	910	1000	1000	1000	
12		5311010	Amour Ali Vuai	FALSE	11.01.11.2_01c	Sorghum Flour	728	800	800	800	
13		5411001	Bargisi Saleh	FALSE	11.01.11.2_01b	Sorghum grain (Mtama)	728	800	800	800	
14		5512001	Dariai	FALSE	11.01.11.2_01c	Maize Flour azam (Unga)	728	800	800	800	
15		5326021	Hamduni Store	FALSE	11.01.11.2_01a	Maize Flour azam (Unga)	637	700	700	800	
16		5511001	Mcha Khamis	FALSE	11.01.11.2_01b	Maize Flour azam (Unga)	728	800	800	800	
17											

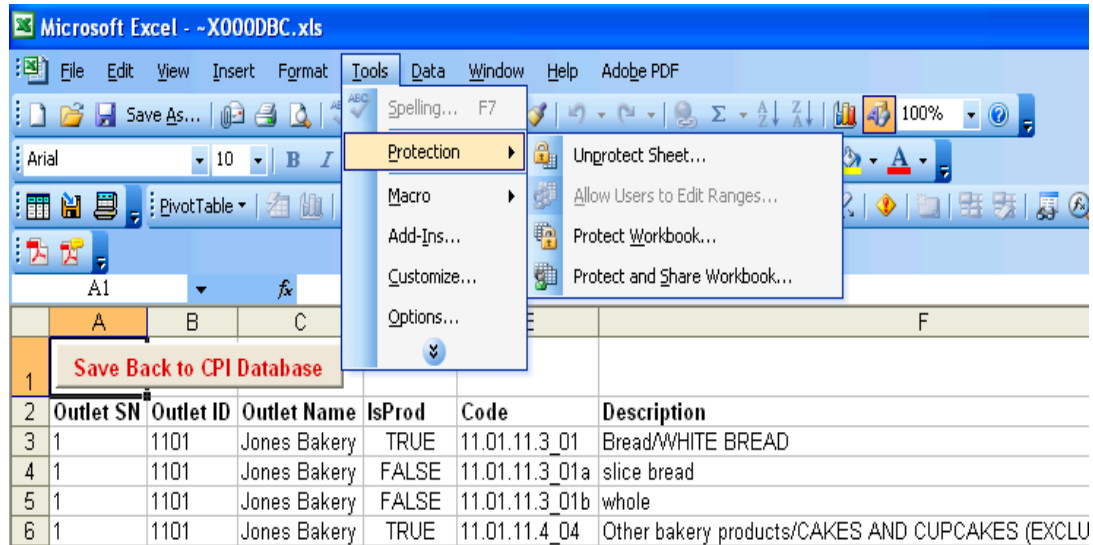
29. Next, to enter the price information into the system, go to **Utilities** in the PIPS and select **Create Excel for Update**.

Snapshot 21



30. Click **Select All** to upload all the outlets, then click **Create Excel Sheet**. Click on the icon to open the Excel spreadsheet. In the Excel menu, go to **tools**, then **protection**, then **Unprotect Sheet**. To unprotect the sheet, use **password 123**. For Microsoft Excel 2007, click on 'Review' to unprotect the sheet.

Snapshot 22



31. Once the spreadsheet is unprotected, go to Data from the Excel toolbar, and filter the data. Filter column D (**IsProd**) **False**. All the varieties with their prices for each outlet should be listed. Copy from the Excel spreadsheet already created (Snapshot 22) into the PIPS Excel spreadsheet, only the base, previous and current period prices. Make certain the correct information is copied for each outlet and variety.
32. After entering the price information, click **Save Back to CPI Database**, then exit. For Microsoft Excel 2007, go to the "View" menu, click on the Macro drop down menu, then run the macro to upload the data.
33. At this point, all the information necessary to compile the CPI should have been entered: areas, products and their weights, outlets, varieties, and prices.

III. ITEM WEIGHT DETERMINATION AND DISTRIBUTION

1.8. Reviewing Item Weight Distribution

34. At this time, products per outlets have been assigned and the system needs to distribute the item weights. Hence, Click **Utilities** in the PIPS menu, then **Global Distribute Item Weights**.
35. To understand how the PIPS distributes the item weight, consider:

Snapshot 23 (Products)

File Edit Insert Format Tools Help						
Arial 10 B <i>I</i> <u>U</u> 100%						
C17						
	A	B	C	D	E	F
1	COICOP-ICP	Level	Description	Urban	Total	
2	11.01.11.1_01	7	RICE	18000	18000	
3	11.01.12.1_01	7	Beef and veal/GROUND/MINCED BEEF	8000	8000	
4	11.01.18.1_01	7	Sugar/White sugar	10000	10000	
5						

a CPI basket that has three products (rice, beef and sugar) with total expenditure of 36,000 shillings, Snapshot 23. Note, rice accounts for 50 percent, beef, 22.2 percent, and sugar 27.8 percent. For these products, prices are collected from at least one of the three outlets (Shoppers 2001, 2002, 2003). There are three different varieties of rice: grades 1, 2, and 3, and only one variety of beef and sugar respectively. Therefore, Shoppers 2001 provides prices for grade 1 rice, beef, and sugar; Shoppers 2002 provides prices for grade 1 and 2 rice, and sugar; and Shoppers 2003 provides prices for grade 1, 2, and 3 rice only.

Table 1:

<i>Shoppers 2001</i>	<i>Shoppers 2002</i>	<i>Shoppers 2003</i>
<i>Grade 1 rice</i>	<i>Grade 2 rice</i>	<i>Grade 1 rice</i>
<i>Beef</i>	<i>Grade 3 rice</i>	<i>Grade 2 rice</i>
<i>Sugar</i>	<i>Sugar</i>	<i>Grade 3 rice</i>

Snapshot 24 (Outlets)

Consumer Price Index Compilation Model - [Search for Outlet]

File Edit Data Utilities Report Options Window Help

Search for Outlet

☐ Search by Outlet ID
☐ Search by Key Words
☐ Search by Area (W)
☐ Search Alphabetically

☐ List All Outlet

☐ Search by Last Column

Show Last Column By
☒ Area (Weight)
☐ Area (Comparable)
☐ District
☐ Data Collector

Go

A-B C-D E-F G-H I-J K-L M-N O-P Q-R S-T U-V W-X Y-Z

Outlet Information - total 3 records. (right click for editing)

Outlet ID	Outlet Name	Notes	Market	Area (Weights)
00001	Shoppers 2001		Urban	Urban
00002	Shoppers 2002		Urban	Urban
00003	Shoppers 2003		Urban	Urban

Snapshot 25 (Shoppers 2001 Assigned Weight)

Consumer Price Index Compilation Model - [Products & Varieties]

File Edit Data Utilities Report Options Window Help

Outlet Weight

Outlet ID: 00001
 Outlet Name: Shoppers 2001
 Weight Design Date: 01/2000
 Outlet Assigned Weight*: 16000
 Outlet Adjusted Weight: 16000

Products - Variety (total: 6 records)

SN	Product Code	Product Description	Unit	Weight	Share	Active
1	11.01.11.1_01	Rice/RICE		3000.00	18.75%	✓
V	11.01.11.1_01a	Rice Grade 1		3000.00	100.00%	✓
2	11.01.12.1_01	Beef and veal/GROUND/MINCED BEEF		8000.00	50.00%	✓
V	11.01.12.1_01a	Beef 1 Kg		8000.00	100.00%	✓
3	11.01.18.1_01	Sugar/White sugar		5000.00	31.25%	✓
V	11.01.18.1_01a	Sugar 1 Kg		5000.00	100.00%	✓

36. To determine how the weights are assigned to Shoppers 2001 (Snapshot 25) suppose the three outlets, Shoppers 2001, 2002, and 2003 provide prices for three products

(rice, beef, and sugar) and all three outlets provide a price of 3,000 shillings for grade 1 variety rice. Then, based on the allocation mentioned in paragraph 35, the PIPS assumes Shoppers 2002 and Shoppers 2003 provide prices for grades 2 and 3 rice varieties, and Shoppers 2003 provides prices for all three grades of rice. Furthermore, Shoppers 2001 is the only outlet that provides a price for beef; hence it was allocated 8,000 shillings for beef. Shoppers 2001 and 2002 both provides price for sugar; therefore each outlet was attributed a weight of 5,000 shilling. See Table 2.

Table 2:

Variety	Shoppers 2001	Shoppers 2002	Shoppers 2003	Variety Weight
<i>Rice Grade 1</i>	3,000.00	3,000.00	3,000.00	
<i>Rice Grade 2</i>		3,000.00	3,000.00	
<i>Rice Grade 3</i>			3,000.00	18,000.00
<i>Beef</i>	8,000.00			8,000.00
<i>Sugar 1 Kg</i>	5,000.00	5,000.00		10,000.00

37. As a result, the total OUTLET ASSIGNED WEIGHT for Shoppers 2001 is: **16,000 shillings**.

Snapshot 26 (Shoppers 2002 Assigned Weight)

Consumer Price Index Compilation Model - [Products & Varieties]

File Edit Data Utilities Report Options Window Help

Outlet Weight

Outlet ID: 00002

Outlet Name: Shoppers 2002

Weight Design Date: 01/2000

Outlet Assigned Weight*: 11000

Outlet Adjusted Weight: 11000

Products - Variety (total: 5 records)

SN	Product Code	Product Description	Unit	Weight	Share	Active
1	11.01.11.1_01	Rice/RICE		6000.00	54.55%	<input checked="" type="checkbox"/>
V	11.01.11.1_01a	Rice Grade 1		3000.00	50.00%	<input checked="" type="checkbox"/>
V	11.01.11.1_01b	Rice Grade 2		3000.00	50.00%	<input checked="" type="checkbox"/>
2	11.01.18.1_01	Sugar/White sugar		5000.00	45.45%	<input checked="" type="checkbox"/>
V	11.01.18.1_01a	Sugar I Kg		5000.00	100.00%	<input checked="" type="checkbox"/>

38. The second outlet, Shoppers 2002, has a total weight of 11,000 shillings. Each variety of rice, grades 1 and 2 have been assigned 3,000 shillings each. Sugar was assigned shillings 5,000.

Snapshot 27 (Shoppers 2003 Assigned Weight)

Consumer Price Index Compilation Model - [Products & Varieties]

File Edit Data Utilities Report Options Window Help

Outlet Weight

Outlet ID: 00003

Outlet Name: Shoppers 2003

Weight Design Date: 01/2000

Outlet Assigned Weight*: 9000

Outlet Adjusted Weight: 9000

Products - Variety (total: 4 records)

SN	Product Code	Product Description	Unit	Weight	Share	Active
1	11.01.11.1_01	Rice/RICE		9000.00	100.00%	<input checked="" type="checkbox"/>
V	11.01.11.1_01a	Rice Grade 1		3000.00	33.33%	<input checked="" type="checkbox"/>
V	11.01.11.1_01b	Rice Grade 2		3000.00	33.33%	<input checked="" type="checkbox"/>
V	11.01.11.1_01c	Rice Grade 3		3000.00	33.33%	<input checked="" type="checkbox"/>

39. The last outlet, Shoppers 2003, was assigned a weight of 9,000 shillings, since the outlet provided prices for all three varieties of rice.

Snapshot 28

Consumer Price Index Compilation Model - [Update Outlet Weight Using Regional Census Data]

File Edit Data Utilities Report Options Window Help

Outlet Weights Update

Please Input a new area weight in "Allocate Wt" column. It will then be re-distributed. Weight Date: 1/1/2000

Allocate Wt	Area Code	Desc	Weight	Outlet ID	Status	Outlet Name	Share	Weight
	Urban		36000	00003	5	Shoppers 2003	25.00%	9000
				00002	5	Shoppers 2002	30.56%	11000
				00001	5	Shoppers 2001	44.44%	16000

40. Snapshot 28 shows the shares of each outlet after the total weight for the basket has been distributed. In summary (Table 3):

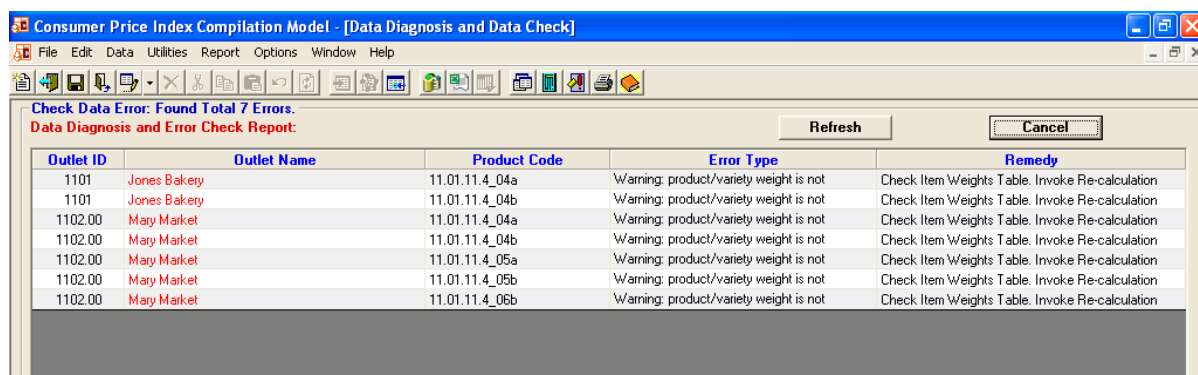
Table 3:

Variety	Shoppers 2001	Shoppers 2002	Shoppers 2003	Variety Weight
Rice Grade 1	3,000.00	3,000.00	3,000.00	
Rice Grade 2		3,000.00	3,000.00	
Rice Grade 3			3,000.00	18,000.00
Beef	8,000.00			8,000.00
Sugar 1 Kg	5,000.00	5,000.00		10,000.00
Outlet Assigned Weight	16,000.00	11,000.00	9,000.00	36,000.00

1.9. Checking for Data Consistency

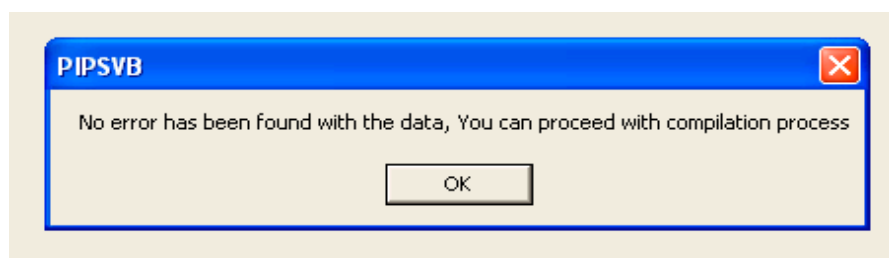
41. It is important to check the data for errors each time a change is made; therefore click **Data Check** on the PIPS main menu.


Snapshot 29



Outlet ID	Outlet Name	Product Code	Error Type	Remedy
1101	Jones Bakery	11.01.11.4_04a	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1101	Jones Bakery	11.01.11.4_04b	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1102.00	Mary Market	11.01.11.4_04a	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1102.00	Mary Market	11.01.11.4_04b	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1102.00	Mary Market	11.01.11.4_05a	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1102.00	Mary Market	11.01.11.4_05b	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation
1102.00	Mary Market	11.01.11.4_06b	Warning: product/variety weight is not	Check Item Weights Table. Invoke Re-calculation

42. If there are errors, messages such as those displayed in Snapshot 29 will appear. Hence, the errors have to be solved before compiling the index. If there are no errors, then the box stating “no error has been found” will appear.



43. When finished checking the data checks, click  for the PIPS main menu to compile the index. Select **Current Period (t)**, **Compilation Method**, and **Imputation Formula**, and then **Preview** to see the preview before compiling the index.

Snapshot 30

Consumer Price Index Compilation Model - [Collect Compilation Information]

File Edit Data Utilities Report Options Window Help

Imputation Period

Weight Ref Date: 12/2005

Base Period (t0): 12/2005

Current Period (t): 07/2009

Previous Period (t-1): 06/2009

Compilation Method

☒ By Product

☐ By Region

☐ By Outlet

☒ Include Imputed Index and Price

Imputation Formula

☐ Jevons:Laspeyres

☒ Jevons:Geo-Laspeyres

☒ Two-Stage Index

Preview

Compile

Download

Detect Outliers

Cancel

Rebuilding the array, please wait...

Outlet ID	Level	Code	Description	Wt0	Base Price	Prev Price	Curr Price
					12/2005	06/2009	07/2009
	0	0	All Products				
	1	1	GROSS DOMESTIC PRODUCT				
	2	11	INDIVIDUAL CONSUMPTION EXPENDITURE BY HOUSEH				
	3	11.01	FOOD AND NON-ALCOHOLIC BEVERAGES				
	4	11.01.1	FOOD				
	5	11.01.11	Bread and cereals				
	6	11.01.11.1	Rice				
5311010	7	11.01.11.1_01	Rice/RICE	467603818.33			
5311010	8	11.01.11.1_01c	Thailand	467603818.33	500.00	1000.00	800.00
5321025	7	11.01.11.1_01	Rice/RICE	467603818.33			
5321025	8	11.01.11.1_01c	Thailand	467603818.33	700.00	900.00	900.00
5326021	7	11.01.11.1_01	Rice/RICE	467603818.33			
5326021	8	11.01.11.1_01c	Thailand	467603818.33	480.00	800.00	800.00
5411001	7	11.01.11.1_01	Rice/RICE	467603818.33			
5411001	8	11.01.11.1_01c	Thailand	467603818.33	500.00	1000.00	900.00
5511001	7	11.01.11.1_01	Rice/RICE	467603818.33			
5511001	8	11.01.11.1_01c	Thailand	467603818.33	500.00	1000.00	900.00

44. Snapshot 31 shows the imputation results. These results can be exported to Excel.

Snapshot 31

Consumer Price Index Compilation Model - [CPI Index Report]

File Edit Data Utilities Report Options Window Help

STPRs Period: 06/2009 -- 07/2009
 LTPRs Period: 12/2005 -- 07/2009
 Formula/Method: Jevons:Geo-Laspeyres -- By Product
 Report Run at: 11/7/2009 9:09:25 PM

User ID: Developer
 Computer Name: MEZIFA
 Show Report at: [Dropdown Menu]

Print
 Export to Excel
 Save to HTML
 Save to DB
 Cancel

Total 15 records.

Region	Level	Code	Description	STPR	Updated W	CPI
	0	0	All Products	100.77	157.28	157.28
	1	1	GROSS DOMESTIC PRODUCT	100.77	157.28	157.28
	2	11	INDIVIDUAL CONSUMPTION EXPENDITURE BY HOUSEHOLDS	100.77	157.28	157.28
	3	11.01	FOOD AND NON-ALCOHOLIC BEVERAGES	100.89	96.98	167.54
	3	11.02	ALCOHOL BEVERAGES, TOBACCO AND NARCOTICS	108.50	0.84	161.67
	3	11.03	CLOTHING AND FOOTWEAR	100.57	7.91	126.24
	3	11.04	HOUSING, WATER, ELECTRICITY, GAS, AND OTHER FUELS	100.38	24.52	155.43
	3	11.05	FURNISHING, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD M.	100.22	7.56	142.60
	3	11.06	HEALTH	100.00	3.13	151.37
	3	11.07	TRANSPORT	102.92	4.20	150.59
	3	11.08	COMMUNICATION	100.00	2.25	93.88
	3	11.09	RECREATION AND CULTURE	100.07	0.53	136.91
	3	11.10	EDUCATION	100.00	1.45	130.73
	3	11.11	RESTAURANTS AND HOTELS	100.00	5.71	184.54
	3	11.12	MISCELLANEOUS GOODS AND SERVICES	100.91	3.23	134.09

45. In conclusion, Snapshot 31 provides the CPI results. The results are provided for the All-Item CPI and for each COICOP group. For example, the overall CPI in Snapshot 31 is 157.28, while the CPI for the health group is 151.37.

Caution to Users of this Guide: The procedures provided in this Guide works best with Excel 2003 Version. The PIPS system is currently being tested using the Excel 2007. In the meantime, Users are urged to use other creative means of using Excel 2007 and the PIPS system.